



## APAC Insights #4

### 2020 in Retrospect: Is this the Year that Reshaped our Digital Future?

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**APAC INSIGHTS #4 - DECEMBER 16, 2020**

**2020 IN RETROSPECT: IS THIS THE YEAR THAT RESHAPED OUR DIGITAL FUTURE?**

**RAJNESH SINGH:** All right, good morning, good afternoon, good evening, wherever you may be joining us today from. Welcome to the fourth APAC insights from the Internet Society. As it so happens, the last for the year. We're glad that you have joined us. Of course, you may be using any one of a number of platforms that we are using today. Thank you for joining us today. We have a great lineup of guests today who will and we'll spend a little bit of time looking at how 2020 has been of course. And a bit of crystal gazing, as well seeing where we go from here.

Now, you know, I guess it's -- it would be a bit of an understatement to say it has been a bit of a year, 2020 and how it has turned out. But for one, I never thought it would turn out the way it did in the first week of this year. And it is actually been quite incredible. I mean, obviously the pandemic has dominated news around the world. And of course, the impact has been felt globally. It has not just been that. We have stock market crashes largely due to the pandemic itself. And we have had stock market recovery. And political turmoil, not one or two, but multiple countries around the world. We have had trade wars, which seem to be escalating, including some new plays in the trade rules, including my own country that seems to be having trouble as well with another fellow Asian country at the moment.

We have had weather events. National disasters and we have had obviously civil unrest in multiple countries around the world. It is quite remarkable, though, you know, whatever happened and wherever it happened, people largely turn to the Internet to be able to cope with what is happening. And I said that and it reminds me of something that happened a couple of weeks ago. So I was having this conversation with the high school student and he was busy on his smartphone and the tablet at the same time.

I said to him, you know what would happen if there is no Internet. He looked at -- up at me. When I said no Internet, at least it took his attention away from his devices. He had a blank

look on his face. He said what do you mean no Internet. I said you know there was no time there was Internet, no TikTok no Facebook, no streaming, no Netflix. There was no online gaming as we know it, and that was barely not even 20, maybe 15 years ago we didn't have all of those. Or even 10 years ago, for that matter.

So that young chap had a puzzled look on his face. I left him at that, I didn't explore further with the look on his face, it left him very puzzled on what I meant when I said there was no Internet barely 15 years ago, in the way we use it today.

With this great dependence on the Internet of course, it means it has come under great scrutiny. In some ways a lot of bad actors on the Internet are having a good run. Cyber attacks, all sorts of data breaches, et cetera, et cetera.

But the other thing that is striking, of course, is particularly in the last couple of years, perhaps, that misinformation has become the norm. And with it, I think there is this attempt to shape online social narratives. But at the same time, people are translating that to the physical world. So it seems there was a time when we tried to bring the physical world online. Now, what we're also seeing is that what happens online translates into the physical world. Particularly when it comes to misinformation. Disinformation and of course a lot of things like fake news, so on, and the impact they have. And in some parts of this Region in particular, we have seen civil riots as a result of information that was spread through this social media application, so on.

The other side of that problem of course is that we now have Governments who are asserting greater or trying to assert greater control including under the guise of Cybersecurity. Some term it under dialing sovereignty. And attempts to control how technology is developed and who gets to develop it.

Of course, it goes without saying that security and privacy remain a concern as they have been a number of years now. I think it is heightened now in today's day and age. Today, we have three wonderful guests from all across the Region, actually. Literally all of the Regions. I have Charles Mok who is a former legislative councillor from Hong Kong and had stellar careers as an entrepreneur and done lots of things. I happen to have been able to -- Charles and I go somewhat back as we were reflecting a little while ago, prior to this call. And you know, one thing I think Charles, we could probably say is we have seen how the Internet itself has developed across the Region, right?

**CHARLES MOK:** Right.

**RAJNESH SINGH:** I have Nikhil Pahwa from India, the founder, publisher from Medianama. And I had the privilege of doing work with him on a variety of topics. And last but not least is my good friend Anju Mangal from Fiji. We didn't want to forget the Pacific part of Asia-Pacific. Anju has recently joined A4AI and the worldwide weapon foundation. I always have a problem with World Wide Web, I don't know why. And she's the head of Asia-Pacific for A4AI and World Wide Web foundation.

So let me begin by asking you, Charles -- and I will ask the same question to the others as well. I hope what I ask now will set the stage for later discussions.

What I would like to know for you, what is your one defining moment of 2020, and in

particular, in terms of context, you know, what implication that would have for digital future or just in the pandemic but I don't want to dwell on the pandemic. But of all the other things that have happened this year, what would be your one defining moment that has implications for digital future?

**CHARLES MOK:** Wow, that's -- if you ask me to choose, that's a difficult choice to make. But I think if we're not going to delve into the pandemic first -- of course, the pandemic really compared to some of the other problems and issues that we have been facing on the Internet around the world, in this Region, I have to say that it is about the struggle between the users and the control by the powers that be. There would be -- if you look at the powers, such as those big tech companies that have been taking a lot of the attention, particularly in Europe and U.S., but actually, people may not have noticed it is also being taken notice in China as well. Because they're increasing similar rat race, in a way. Maybe different motivations, but from the Chinese Government saying some of the big tech companies are becoming too big and have to be reigned in some and controlled.

So I guess that's one perspective to look at it. The other perspective is the other powers that be is the Government. Because with the pandemic, there are obviously -- for many Governments, a sort of balance. They have to strike a balance between trying to control the epidemic, pandemic at the same time, about maybe sacrificing some of the civil liberty of people, their privacy, so on, on the Internet. And I do see that there are a lot of Governments, these days, including ours here that is using this in some ways as an excuse to sort of trying to target the information that they don't agree with. And it would have anything with this information. Even if you are casting a little bit of doubt, not only politics, putting that aside. But even if you are casting a little bit of doubt about the vaccines that they are putting out or the supply or the logistics or the sources of these vaccines, they would say this is misinformation. So I would think that that would be what I would probably see as the biggest potential long-term impact on the Internet development right now.

It is still about the struggle between these three factors. The Government, the big tax, and the users, which we, the ISOC really we're trying to help.

**RAJNESH SINGH:** You know, what he just said made me reflect on something. There was a term we used to use quite a bit, 15 or odd years ago or 10 years ago, the user centric Internet. It certainly feels like we're moving away from that, it is now big tech development centric Internet in some ways. We'll come back to this actually. This big tech issue and all of that is something I was hoping to explore a little bit in detail later on.

So we'll just pause on that there, and bring in Anju. What do you reckon Anju, what is your thinking on this? Your one defining moment?

**ANJU MANGAL:** So I will bring it to the reality that small islands are facing, some countries in Asia and in the current context. We still face the brunt of natural disasters. It wasn't just about COVID-19, but also we had cyclone Harold and in Bengal and right now we're facing cyclone Yasser that might hit tomorrow or later tonight.

Keeping all of this in mind, we're constantly worried about electricity problems, water cut, trees falling on electric polls, et cetera in the Pacific. Any minute I think the power will go off and I will have Wi-Fi problems. Having back up problems, having mobile data to connect to the Internet is crucial for me so I can stay online and at least figure out what's happening in

terms of my friends and family and if anyone is having any major problem.

But I think coming back to, again, the reality is that it is okay for me sitting here in an urban center. But what about my friends and colleagues or people with disabilities? And people living in the remote communities? And so for me, the big question is how do we stay online and stay connected when we are in the middle of disasters? And how do I work with Telcos and the Government including having public-private partnership to ensure these options are available for our lower income citizens that cannot afford smartphones or devices and making sure they have data plans constantly, even during disasters. Making sure they have fast connections. So to me, it is a question about is it -- is the Internet a human rights during disasters? I don't know. For me, yes, it is. But at the same time, I think we also need to be realistic about how we approach things, particularly on the small island.

So we're all preparing, despite all the challenges. And I think for us, it is that we need to remain positive and to continue looking for solutions. And I think it brings back to one of the studies that we did with ITU that we need around \$428 billion, U.S. billion dollars to connect the next 50%. Most of this is for south Asia. East Asia and the Pacific, for around half of the unconnected population. And 55% of the required investments. We constantly say infrastructure, infrastructure, infrastructure is the biggest investment challenge. So I'll leave it at that for now.

**RAJNESH SINGH:** Okay. Nikhil, your thoughts?

**NIKHIL PAHWA:** Raj I will try to sneak in a few points under the one bigger theme. For me, that is the geo politics of tech, especially the way it is weighing in on China and what happened with the TikTok in India and the speak of the ban of TikTok in U.S. It is more of the multilateral Internet to a user centered Internet. The ban really brought to us to the entire, you know, challenges we have seen emerge over the last two years around data localization, cross border data flows. So my big theme is that now, it is like the ball is rolling downhill. You are going to see more diplomatic moves around negotiations over data. Around e-commerce. Around competition and the dominance of big U.S. tech. And now the increasing dominance of China tech. You know, it is probably some of the issues emerging around infrastructure, what we are seeing with 5G. And linked to that, what we're seeing is the emergence of digital sovereignty as a theme. I remember the beginning of 2020 Angela Merkel returning from the trip to India mentioned serenity in the EU context. In India, it is a strong push of tech nationalism against U.S. tech and China tech.

So countries and even local businesses are beginning to push back against dominant and using competition issues emerge. We have seen this, you know, in a sense come add fuel to the fire when it came to the ban of over 200 squeeze apps in India. So more and more regulation. More Government intervention starts off with the geopolitical situation and then percolates down to actual on-ground impact on both the persistence that can operate as well as what users can and cannot use and how they use it is regulated. Especially with respect to privacy, with respect to free speech. With respect to availability of services, with respect to intentions. All links up. I think the big thing that is emerging is the impact of geopolitical situation on technology.

**RAJNESH SINGH:** So okay. Just a reminder to people listening in, whatever platform you may be on. We have people monitoring all the channels. If you have questions or comments, please put them through. If you are on the Zoom platform, there is a Q&A

Forum set up, should be at the bottom of the screen, I am checking my screen, I see it there. Feel free to ask your questions and my guests on the force will be happy to answer those either in the Q&A itself or we can do it live.

Nikhil you brought up a couple of things, which -- some of it Charles also alluded to. The big tech angle. This geopolitics thing. I have a question around this. You know, you talked about the push back that people although that is out there against China tech, U.S. tech, whatever is closest to dominance at the moment. But how much can you push this back? Is there a possibility that every country or every economy in the world could develop its own tech companies and then every country only uses its own applications and services? Is that where we are headed? Is it practical?

**NIKHIL PAHWA:** It is not practical, but it would be damaging for the Internet as a whole. Because we are connected by humanity across the Internet. We are able to communicate with each other, learn from each other. It allows us to progress as a society. I think this largely stemming from the fear. Trump's push toward bilateralism from multilateralism, put the cat amongst the pigeons.

If you are a country, how would you respond to this threat of what Trump wanted. To something happens to your local businesses or the ability to shut down payment networks in a country, through maybe MasterCard, Visa and therefore completely derail the economy. How would you respond as a country? You try to build your own systems and try to ensure the data of your citizens remains within your country and more critical data like healthcare information or payment information, India is doing all of that. But you also start trying to develop your own local platforms and in addition to that Raj, you probably look at what a platform does. What India has been doing over the last six to seven years is building multiple digital identity projects and using that for the delivery of Government services and also creating these databases to empower the economy. So for example, payment state is going to go and also mobile users data, all of that information is going to be a part of an entire credit information system. There is going to be insurance and lending built on top of that. There is a healthcare data system that is being created. So the idea is to counter data collection by U.S. tech over which the U.S. has jurisdiction. You start building your own data collection systems and then start building your own economic systems on top of it. What the pandemic has done is given a huge flip to this. We have seen for example, just yesterday in India, a new health policy being announced. A Roadmap being announced. You will see it in health, you will see it in education, you will see it in other domains. India has that scale. We have about 700 million Internet connections. We have seen digital transactions almost double year on year, from 1.2 billion last year to 2.2 billion now. We have very low data prices at 13 U.S. cents per GB. We have users of 11 to 13GB per user per month. It is crazy. As society digitizes, more Government controls come in.

Other countries may have a slightly tougher time, because it is a question of notion. So they might be negotiating with U.S. tech for how much serenity they can exert over the evolution of their digital economy. India has that heft because of the large user base. I'm not sure if others do. More will look at this identity as a means of building their own systems, first Government tech systems and then using that to empower local businesses as well. And as those improve, as those gain strength, they will start using competition regulation to push back against U.S. tech and China tech and start using taxation issues. Using surveillance and jurisdictional issues to start gaining some of that control back for their own country.

So I think in India's slightly further ahead as is Europe. Europe is probably furthest ahead. Bit by bit, different countries will start doing this over the next 10 years, I guess.

**RAJNESH SINGH:** The problem I have with that is it cannot scale. I mean, India and China are unique. One is they both have a population over one billion. So the scale is not at issue ever. Neither is capacity, frankly. But I think when we start these discussions a lot of times, of course, the U.S. is the largest economy as well.

And if you look at Europe, of course, that is a whole block. It is really large as well. The problem I have is this. You know, it is okay for all of those countries, which have the economic power, or the science and engineering skills or the connectivity and infrastructure, et cetera, et cetera.

Often, we always talk about all these countries and how it is in the U.S., how it is in Europe, how it is going to be in India, and how China has done it. But this doesn't scale to all the other countries though, does it?

**NIKHIL PAHWA:** But what you are also seeing is the emergence of blocs. For example, in terms of data transfer and where the data flows, ASEAN is emerging as a strong bloc now in this Region at least. You might see South America emerging as a bloc. Europe is -- no single country has a dominance. But the EU as a bloc is in existence. The regulations apply across the EU. You will see more blocs coming up to counter the dominance of U.S. and China. Charles you want to come in here.

**CHARLES MOK:** I quite agree with Nikhil on many of his points. He just called it blocs. I think for many of us who have been on the Internet for a long time and we are still, you know, thinking about the good old days of one single Internet and apparently one standard and, you know, the U.S. taking the leadership role whether or not that is good old days or not, the old days. That's probably gone.

Like many things else -- many other things. The U.S., either they don't want a leadership role or in many cases in terms of technology, in the technology world, commercial or civil society, it seems they're not able to take that leadership role to a large extent any more. If not Asia, even Europe is not listening, not following what the U.S. in terms of its Government or some of the big tech companies where they're trying to lead the technology or regulations. So I think -- actually, you know, I am actually quite foolish myself about the possibilities for India. You know, for -- not because I know too much about it, but the reason that probably because I don't know enough about it, I find its potential to be tremendous. In several ways. You know, Nikhil mentioned some of it. You know, I really like what you mentioned about the focus on identity. Because I think that is really probably one of the areas or one of the Chief areas of new technological as well as regulatory or a real shift in the next generation of the Internet. To solve the problems of identity. How to let users really get better control and not being controlled by my Apple ID or Google ID or Facebook ID and so on.

So that's -- a lot of technology, wonderful technologies are being developed and so on. Now, that is probably the only way that we can try to -- from the users' point of view that we can try to counter many of -- many of these, as I mentioned earlier, the Government or big techs. The big techs are not just American big techs, but could be Chinese big techs and

others. That's the only way. Comparing maybe India with countries like China. You know, if I look at some of the squeeze big tech, I think they are going to face particular difficulties in the coming year, too.

Number one, because of obviously the international pressure that they're up against with many of the western countries, you know, 5G and Huawei and so on. Not only that. Even domestically, they are facing more and more regulations from the Chinese Government itself.

So life for a Chinese company like Alibaba, Tencent it is not going to be easy in the coming few years. They will get pressures from inside and outside. It is a great opportunity for countries like other large Asian countries or blocks like Asian to emerge in big ways. India is one.

I was in another panel yesterday and they were talking about the laws that are being developed in India right now. In terms of data regulation. You know, it is a great opportunity for countries like India and also I understand Indonesia is working on something similar. To really take charge of a new generation of data regulations. And AI regulations, rather than countries or jurisdictions like Singapore, which have had privacy regulations. Since 2014. And Hong Kong we had our regulation since 1997.

But we're using an old car. And you have the opportunity to lead us. In Hong Kong we're talking about personal data. Still talking about simply privacy. But in fact, the world is talking about data regulation and algorithm transparency. And we're stuck in an old world. So I think that's actually a great opportunity for these other Asian countries to really catch up in the next several years.

**RAJNESH SINGH:** Anju, earlier, I saw you vigorously shaking your head. Maybe you want to verbalize why you are shaking your head.

**ANJU MANGAL:** When we are speaking of reshaping the digital future, one solution doesn't fit all. Particularly for smaller communities and countries that continue to struggle. I will play devil's advocate. There is push to step in and regulate big tech like Facebook, Google, Amazon, they have so much influence in the culture, and users' daily lives. But it is necessary for policymakers, lawmakers, and Governments to become more involved in how to -- how these companies deal with essential issues, like the speakers had mentioned, to privacy, data regulation, cyberbullying. I know that technology has become so central, but it is also for Governments to think about what does that mean about say for example, elections or what does that say about bullying. Or what does it mean to women that face online gender based violence? I'm sorry. To me, forget about technology for one minute. Think about the reality again. I mean, yes, of course, we can think about technology, sorry, but coming back to reality in terms of the cost of smartphones, right? We are talking about, you know, COVID-19, digital tracing app, et cetera. For me, device affordability is a huge growing concern. And the cost of smartphones in developing countries has fallen over the recent years. I think prices have developed in like 30% in Asia, 25% in Latin America and the Caribbean and also Africa. It is now happening in the Pacific. But nevertheless, the cost of a smartphone still remains out of reach for many. So when developing apps we must take into account, for example, basic and feature phones, not article solutions for smartphones. In a number of years, the device effectuates, Mozilla, and [?] have released low-cost smartphones in developing countries. One in particular, it has essential features. 3G, 4G,

Bluetooth connectivity, Wi-Fi hot spot, et cetera. These are perfect for low-income countries and these cost like \$80USD. So again, when we look at digital identity, all of the issues we must think about not just one particular group of people, but we need to look at or consider other users that are using basic phones and feature phones. I just wanted to bring to that point. Thank you.

**RAJNESH SINGH:** Anju, let me play the devil's advocate, sort of. You talk about the cheaper phones, probably lower end processor, less memory. Less processing power, let's say. Don't we disenfranchise those people when you say this is your pathway to the Internet and getting online? On the flip side to that we have the other countries we talked about, U.S., India, China, a large part of Asia in fact, Europe, where half of connect is the norm. If someone says I have a 1 gig data cap, it is laughable, because the OS update every month is more than 1 gig. So what do we do -- I guess what I'm trying to say is are we starting to segregate people, depending on their socioeconomic status and the country they come from that this is good enough for you. And maybe when do you get here? Whereas, other parts of the world are streaming ahead.

As an example here in Australia, barely getting 100 megabit on our overpriced national broadband network, which don't let me get started on that rant.

But, you know, the funny thing is I was talking to the chap that came -- there was a problem with the fiber and he came to fix it. I started chatting. I said eight years ago in Singapore I had the speed you are giving me today. Today it is like Singapore, Japan, many other places, Hong Kong, they're talking 1 gig and 10 gig connections to the home. The user experience you have when you have that much bandwidth and capacity is different to what you have when you have the minute sort of connections we're talking about. So that concerns me. I think that is almost a whole digital device we're promoting in a manner of speaking, isn't it? Nikhil wanted to intervene earlier. Is there something you want to say Anju or should I go to Nikhil.

**ANJU MANGAL:** That is a good point. We look at connectivity in the threshold in terms of making sure that talking to Telcos and talking to Governments to produce low-cost devices but also looking at making sure that we are promoting 4G connection and 4G connection not just for one community, it is not for urban centers but also for other communities. I think when we pitch these to the Government and also Telcos. We need to come up with a plan that is sustainable for everyone. I agree, I had problems at times. Imagine the people in one particular island right now, they don't have barely have 3G. So how do I convince the Government and the Telcos to make sure they also get 4G connection, but with 4G connection they need affordable devices. And by 4G, good, fast connection to be part of this generation where people are downloading and having entertainment, et cetera, yeah. I'll leave it at that.

**RAJNESH SINGH:** I will be a bit cynical with the next statement. What you should perhaps talk about with this them is go 5G and that will solve all of those problems. Nikhil and Charles.

**NIKHIL PAHWA:** Raj, you forth forgot to say AI. Before I respond to what was said I want to add to Anju. I think for me, the Holy Grail of meaningful Internet action and users will be when people can program in their own languages. The Internet is not just about consumption, but also about creation. If everyone can build technology on their own



languages, programming in their own languages, not just English, that is when I think we will have perhaps the Holy Grail of Internet users in the world.

Just moving back to what Charles talked about, I think I am very skeptical about this entities, to be honest. There are repercussions to being able to identify every individual and link them to a single Government controlled identity. It creates -- firstly it creates more scope for data theft. It creates for scope for identity theft because you are linked to a single ID. If there are multiple IDs and linkages itself. You could be under surveillance. Your entire life can be controlled by the Governments you are with. In some countries that might be fine. Others, we know all too well, this can be a dangerous means of disenfranchisement.

On the data regulation and privacy regulation front in India, I want to add the personal protection bill we're looking at is a complete mess. There is an ambiguity on what kind of data is localized in the country. Imagine a tech system that has to now start segmenting data along multiple lines and treating different datasets differently. That lessons the scope and for releasing and coming up with new products. This is secondly a major concern is the age of consent is 18, which is far too high. And especially from the 16 to 18-year-old, it is sort of kind of judges them by making them dependent on parental consent regarding how to use the Internet. Lastly, there are no restrictions on Government access to data. So as -- by bringing more Government into tech to counter the dominance of big tech, you are creating room for master systems.

So give me -- I would rather have, you know, I would rather have a situation where there is a company that wants to make money off me, than a Government that basically wants -- is in a position to protect my well-being. It is not an easy choice. What we need to do going forward is ensure human rights are in the center of all things everywhere. And that strong checks and balances are put into place. We need that more than anywhere else in this entity systems, those are lacking right now.

**RAJNESH SINGH:** Earlier when you speak about digital identity, I had a few concerns around that. You know, I'm not so sure we will get to that today, but maybe we need another session. Charles, you wanted to come in.

**CHARLES MOK:** Yes. Actually, first I wanted to respond to some of the things that were said about digital divide. My take is that the solution will be different everywhere. There is no one-size-fits-all solution. We each have our own problems in terms of the closing of the digital divide in each city or jurisdiction. Even in different cities or Regions in the same large country. The problems and the solutions are going to be different. The biggest problem right now is nobody seemed to be talking, fewer and fewer are talking about it. Maybe we would say in some countries we have 10% or 20% of people not getting access. Now that number is down to 5% or 2% and people think that problem went away. First of all, getting to the last 1% or 0.1% is difficult. And with the pandemic we have problems that we thought we overcome and now come back because people work from home. Now we used to think that my 1 gigabit connection at home is good enough, and then hey, I have three students going on with members much the family. The kid having to learn from home. And not enough bandwidth. That's the problem with the developed world. In the developing world, we have different problems. In terms of, Raj, you talk about maybe the infrastructure. The broadband, the connectivity is going to be as important if not more important than the devise themselves. The devices, you know, go cheaper and cheaper. Cheaper Chinese manufacturers or maybe soon in India, manufacturers. And then going to

the back door. That is probably easier to solve than the infrastructure problem. They don't come right away. Especially like was mentioned like the remote or isolated spaces. The Pacific Islands and poorer countries. That is difficult. It is not like shipping cheaper phones in as devices.

About Anju, Nikhil the points about the worries of identity. I was definitely not talking about centralized identity. We all have problems with the sort of surveillance and particularly for us in my country and many other Asian countries we have huge worry in the population about that.

When I talk about identity and the trust around identity. I think the biggest point I was trying to make and made it clear earlier is about user centric and user control. I really want to talk about -- it is not enough time today, I want to mention today is about the fact that there are a lot of these new technologies that are putting users at the control. You know? Things like W3C standards on software identity and others. You know, really taking the control with the users so they decide about what to share with whom and when or where.

Now, there is a lot of interesting technologies that is being developed going on, using cryptography and some cases blockchain and so on. Of course, it will take a long time. Still, at some point it will take some of the Governments to adopt. That is difficult. I think more and more, we're looking at this Internet like I said in the beginning, this three end goals. This triangle. I don't think many of us can really believe that we can trust and believe and put the case to the Government and believe that they will solve it for us. And not the big tax. How do we empower the users to really take control. That has to be from technology. It can't be just regulations. They're legislated by the Government and rely on them to solve the problems and give the rights back to the users. That will not happen.

If we have any chance of doing that, it has to come from technology. Using the TEK really, hopefully in the next generation of Internet and RG to really make it decentralized in a way. To make it decentralized. Not like we're talking about the Internet being -- we talk about the servers in the old days, you know, network on network. That seemed to be decentralized. No, it wasn't. We're talking about the data and the control of the data being decentralized. How do we make that happen with the new generation of technology. That is what I hope in the next few years there will be breakthroughs, adoptions in those areas to make it happen. That is what I meant about identity. I'm totally with you. If we are talking about the centralized ways of controlling identity, maintaining it through Government systems, so on. That is -- that is tricky. That is surveillance.

**RAJNESH SINGH:** Based on what you said, Charles, about allowing the user to make, say all the granular decisions, et cetera, et cetera. I wonder how many users would actually want to do that, right? We have the case where a lot of people don't read [?] for example. And others don't want to muck around with ticking this or that box. On the one hand, I think we have a lot of users and advocates for privacy saying we need the controls. Then the other said that says I want everything to believe convenient and everything should work. I don't want to sit around trying to do stuff. Thoughts on that?

**CHARLES MOK:** A quick answer and I will try to give time back to the other panelists. Think about all of this doubt that a lot of users have on the big tax right now. People are saying I want to leave Facebook and move on to another platform, because of this reason, that reason, censorship, they think it is unfair, whatever. I want to leave Gmail or these systems.

More and more, I learned from the technology community as well as from user community. There is more and more of a renewed urge of people saying that, you know, why can't these systems operate like if I'm switching between my phone companies and I can keep my numbers. I can even keep my data. And I can move my Facebook data over to another social media. Well, like in the old days, if I can move MySpace over to Facebook or from Facebook over to another platform, people are talking about me MEWE right now and so on. That can be done. If there is this sort of intermediary that is being built. That is a new standard that allow people to take control of the data. Part of it has to come from regulations. Right? I hope if the Governments, well, some leadership probably will have to happen. From the European regulators and American regulators. They're talking about continue I don't believe they should just talk about it like I breakup Facebook, I break it up into WhatsApp and Instagram and Facebook, three entities and the problem is solved. It will not be solved. You have to look at it from the angle of the portability, the empowering the users to have that part ability. That is a good example to show users do you want that freedom? If you can achieve that freedom, people understand that they can -- they can understand the advantages of the program, then we can move on.

It is not just about reading terms and conditions, so on. It is really about when we use the platforms, we were complaining about being tied to platforms. These platforms are using my data to make money and so on. How did people take control? With that kind of freedom through not breaking up the companies, but allowing the use ares to take control and be portable between different platforms and different social media and different service providers.

**RAJNESH SINGH:** So Nikhil may call that the other holy grail, the data portability between platforms.

**NIKHIL PAHWA:** Although Raj I would rather an email address analogy rather than phone analogy.

**ANJU MANGAL:** I don't think it is just about regulation. I agree with leadership, what was mentioned. But it also about digital literacy and digital skills. If you want to get rid of online gender based violence or even the gender gap, it is important to have more digital skills and digital literacy. I want to remind everyone, we need to ensure that -- I am a big advocate for this. We need to ensure gender equity and fairness. So all have equal rights when we talk about making sure that they are connected as well.

We have been advocating for an open and secure web for a long time. You have been, and I have been. Some Governments are shutting down the Internet or banning social media. Like Facebook. We had a situation in the Pacific. How do we tackle that? What are the key incentives for the Government. What would be the entry point to make sure the Government don't shut down or don't ban the social media platform. Again, it is about user, about a constitutional right, it is about human rights. If it is about a human right. How do I look at it?

I think we need a multistakeholder approach, so when we develop national broadband plans and development for countries we need good implementation programs and Roadmaps. We need to bring in the Governments and Civil Societies and bring the big tech companies to the table to discuss how Governments can take the role and make sure

everyone remains connected, every is secured and everyone has a voice to voice a concern online. This comes with a certain type of responsibility when we are trying to raise awareness. Things like cyber safety. I think having an open dialogue, not just in a theory based way, but realistically, we need to really think about who would be the real players to actually make the changes on the ground. Because I think this plays an important role.

**RAJNESH SINGH:** I will check with Noel, who is monitoring the various questions. Did we have any juicy questions, Noel, from our guests?

**NOELLE DE GUZMAN:** Hi Raj, I don't see anything in the Q&A at the moment. Let me see if we have questions coming in from Facebook and for live stream.

**RAJNESH SINGH:** You check that and I will come back to you in a couple of minutes.

**NIKHIL PAHWA:** Raj, I had a couple of other things to say, if I may.

**RAJNESH SINGH:** Sure.

**NIKHIL PAHWA:** Through other things I have seen in deployment during the pandemic. One, we're seeing an increasing shift towards facial recognition for authentication and identification. And I think with health concerns and awareness being cohesive, certainly post the pandemic as well, you will see fingerprints [?] and more facially are getting captured which lends itself to the deep fakes as going into the future. We have seen significant growth for edu tech. And there is more concerns regarding the digital divide in terms of rich schools, poor schools, rich students, per students, access to devices, access to activities, access to language, cools. Those are increasing. Of course, that lends itself to more security risks and other issues.

Third is a massive growth in e-commerce deliveries. What we had pre-pandemic has been surpassed by now. And a significant shift some user behavior towards e-commerce deliveries during the pandemic. I think that is going to sustain. Each of these, it is an action of user behavior towards payments. Edu tech, e-commerce and more users of the Internet coming in, in terms of the digital divide taking hold.

**RAJNESH SINGH:** So, you know, you asked -- sorry, you made an interesting statement about user behavior. In fact, that is one of the things I had hoped to get to, although we're getting close to time. One thing on that. Haven't talked about the pandemic, interestingly enough thus far. One thing the pandemic has done is modify user behavior. From a lot of the research and preliminary research. It is suggesting post pandemic, when things settled back down. How it settled down because people were using the new normal terminology and some things have to change. Moving forward.

Aside from that how do you see user behavior changing? We know there is larger use of e-commerce, and e-commerce itself there is a whole ecosystem around it. Not just the retail web shop that sells you stuff, it is all that things that takes getting item X to your place, and then perhaps you have to return it. There is an ecosystem behind that.

Not unlike how bricks and mortar are, there are people that make money out of it. The whole thing about digital identity you brought up earlier, and how that is also going to play a role going into the future. And we brought up things about connectivity. And talked about

big tech. A lot of the dependency we have on -- due to the pandemic on this digital technologies, whether it is to play, learn, whatever it may be, a lot on the backend have dependence on big tech itself, don't they? It could be someone running the systems of Amazon, Microsoft, Google, whoever is the backend cloud provider. It goes back to the big tech as well. How do you see all of this changing going into the future. You understand? Charles?

**CHARLES MOK:** Well, ... yeah, like you, I think we probably don't need to drill into too much about, you know, saying this is the new normal and people are so used to using Zoom and other conferencing tools to operate and to their business and so on. E-commerce, so on. That seems to be the obvious consequence or, you know, coming out of the pandemic, people are more used to that kind of behavior. I think when I look at many of these apps that are developed by different countries. I looked at a list of Asian countries. Most of the more established Asia economies are creating apps. Some are even using Telco data to locate people in proximities and to try to track and trace cases of COVID. Whether it is the purpose ownership a consequence Governments are finding people in many cases to be more and more accepting to these applications because of their own safety, people are worried about getting COVID. When there is such an app, it seems to be at least in some economies, there are also a lot of privacy concerns and groups that come out to say the apps are fully written or whatever.

On the other hand, in some cases, like in Singapore, I was reading that the senior citizens are saying that the apps is too difficult to use. What do you do, you give them a wrist band. And they love it. In a way citizens are also getting used to be being surveillanced and giving up some privacy for some particular reason. In this case, health. Coming out of the pandemic, like it or not, my take, my worry oh my guess is that there will be more and more countries, airports, airlines, so on. When you really going to be able to travel, it would require you to have a vaccine passport. What would that be? That comes back to Nikhil talking about the centralized model.

If there is a centralized model and huge amount of data is shared between different countries, Governments, airlines, transportation companies, airports, so on, about your health data. And you talked about facial recognition, other biometrics, that is worrying. People coming out of the pandemic because I'm eager to travel. I don't care. I really want to go visit other countries and get a vacation. I give up my privacy. People get used to it. That is a worry as well. Some Governments take it as an opportunity to enlarge the ability and data they collect. And the ability to surveil.

**RAJNESH SINGH:** I'm being reminded that time is actually up for the session. So I think I should quickly wrap this up, because we have some people that are engaged in this session for a little bit of time including our very lovely captioner that had to wake up very early in the morning.

So the last question I have for everyone. And I will start off with Nikhil as I believe he needs to run off to another work group shortly. So I was thinking of what I would ask as the last question. Then I thought I would do it this way. Maybe start it different, maybe not. Fast forward five years into the future. It is December 2025, exactly roughly the same time, five years from now. All four of us are having the same conversation as we're having today. The question I asked you at the beginning of this session, asking you what was the defining

thing that happened this year, right? So now what you have got to think about is what is happening in 2025 that is going to define which way the digital future from then on will shape up? Nikhil?

**NIKHIL PAHWA:** That is the worst possible question for me. I can't think beyond the next year right now. I look at things more in terms of teams and directions.

Like I said, more centralization, more Government control, more surveillance, more geopolitical of tech. I believe that more and more countries will have cyber diplomatic officials and a call there to deal with the emerging, you know -- stepped away from multilateralism, if Biden doesn't fix what Trump has destroyed. I look at themes. I think the same themes will play out for the next 10 years, going forward. We will see a lot more discussion and regulation around data and its importance. I hope, like I always hope, human rights privacy, free speech are at the center of the conversation. We will see new platforms emerge and see old platforms weaken. Hopefully something will be done about the dominance of that, so there is more room for more entities to grow. I think the move towards sovereignty, the push for sovereignty, nationalism, that is here to stay. I really don't know what kind of a conversation we'll be having in 2025. I think it will be more of the same. It is just that it will be a deeper conversation with more anecdotes and more issues for us to discuss.

**RAJNESH SINGH:** One of the reasons I thought I would ask this question is because a lot of themes came up in the conversation today, artificial intelligence and facial recognition, et cetera, all of those will have a part to play in the discussion five years from now. Anju, what about you.

**ANJU MANGAL:** That is a tricky question. So by 2030, we are hoping that the next 50% will be connected, right? So for me, I to be honest. I hope that the next 30% is connected. I think for me, what I want to make sure is that I'm continuing the discussion about having private-public partnerships. So talking to like renewable energy companies and Telco to make sure we have disaster resilient solutions, particularly for small islands. The other thing is I know we're talking a lot about Cybersecurity. For me, cyber safety is a critical thing. It is one of the number of significant public policy issues as well. And we need to sort of take measures to improve Cybersecurity, particularly for small islands who are still not familiar with all the security issues. I think this has a huge impact on businesses in say in the Pacific, particularly in the Fiji and Solomon islands. And I think for us is that we need more and more awareness in terms of having capacity building, training, awareness on this. I think these are the two things that I really want to focus on. But ... the other thing I would like -- and I don't think it is going to happen. It probably will get worse.

Is trying to reduce online gender-based violence. This is one of the things that we're working on. I would like to invite everyone to work with me to reduce online gender-based violence. I will leave it at that. There are so many things. I will be realistic about what I am planning to do.

**RAJNESH SINGH:** I hope we have moved on from discussing things to doing, implementing things. And some of the things like gender based violence particularly online. They don't belong online. I hope it is put a stop to. You know, those are social ills as well. It is nothing to do with the Internet or social media, it is people leveraging the opportunities they have online to amplify that. Anyway, that is probably another session.

**ANJU MANGAL:** Hopefully there is no virus. That is a big struggle.

**RAJNESH SINGH:** Indeed. Or could be a new one, who knows. Charles?

**CHARLES MOK:** I'm bad at making predictions, only one I will make, is that all of these targets by regulators against big techs, Facebook, Google, so on, they're going to take probably more than five years. So lawyers will make a lot of money.

I will also only know how to cope. First of all, the devices among countries and nationalisms and so on will not take the world, move us towards more conflicts and even war. That is one big worry I have. The other thing is I do hope that there will be more focus on the users right, technologies that are being developed, hopefully they will be tested over this next five years to put more control in the hands of the users. And finally, I have one question. And I do want to know what the price of Bitcoin is going to be in five years' time.

**RAJNESH SINGH:** Indeed that would be good, wouldn't it, with a speculation there.

I am going to wrap up this. I think everyone has been pleased to say it is a very interesting conversation. Thanks very much to all the guests today. Much appreciate your time and your contribution to this session.

I've actually enjoyed this. This is the fourth one we have done this year. We started this during the pandemic. It is very interesting. I made a few notes on some things I would like to do as a session in itself. Not necessarily in this format, maybe, but there is some really interesting ideas and thoughts that came up from our speakers today that could deal with a bit more of discussion.

With that, thank you very much. Thank you all for those who have attended today. As the year is winding down, we wish you all the best for the end of the year and the new year ahead. All the best to your family. Stay safe, be well, and we look forward to seeing you again in the new year, with new epic insights. With that, thanks very much, and stay safe.

**CHARLES MOK:** Bye-bye.